UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/703,977	11/07/2003	Carlos R. Corleto	COS-928	2841

7590 12/20/2007

David J. Alexander
Fina Technology, Inc.
P.O. Box 674412
Houston, TX 77167-4412

EXAMINER	
AFZALI, SARANG	

ART UNIT	PAPER NUMBER
3726	

MAIL DATE	DELIVERY MODE
12/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/703,977
Filing Date: November 07, 2003
Appellant(s): CORLETO ET AL.

Tenley R. Krueger
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 11/27/2007 appealing from the Office action mailed 9/4/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

JP 64-478778	Hiroyuki Yamada, et al.	02-1989
6007761	Nakagawa et al.	12-1999

Appellant's Admitted Prior Art (AAPA)

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 26-28, 50, and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 64-47878 (hereinafter '878).

Regarding claim 1, '878 teaches a method comprising: perforating (2) a steel plate (1, English Translation, paragraph [18], lines 1-6), forming a devolatilizer nozzle from the steel plate (Figure 1), and heat treating the devolatilizer nozzle (English Translation, paragraph [08], lines 1-6). In as much structure claimed, the nozzle of '878

is considered a "devolatilizer nozzle". '878 teaches that a volatile component (reaction gas in the CVD device, paragraph [20], lines 1-6 and Fig. 2; and highly corrosive solution, paragraph [02], lines 1-4) passes through the perforations in the nozzle. The Examiner considers that both the gas and highly corrosive solution are "volatile" components.

Regarding claims 2-3, heat treating inherently increases the yield strength and tensile strength of steel.

Regarding claims 26-28 and 50-51, the limitations pertaining to the capacity of the nozzle, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Furthermore, the limitations pertaining to the capacity of the nozzle do not further limit the method of forming the nozzle.

Claims 4-15, 19-21, 23-25, 29-40, and 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over '878.

'878 teaches the invention cited above with the exception of specifically disclosing the claimed yield strength and tensile strength of the steel material used, the claimed sizes of holes, and the thickness of the plate.

Since Appellant did not timely traverse the examiner's assertion of Official Notice that using the claimed yield and tensile strength, the claimed sizes of holes, and the

thickness of the plate are well-known in the art, such assertion is taken to be admitted prior art (MPEP 2144.03(c)). It would have been obvious to have provided the claimed yield and tensile strength, the claimed sizes of holes, and the thickness of the plate, in order to provide a nozzle having the desired strength requirements depending upon the application the nozzle is used for.

Furthermore, the particular steel used is considered an obvious matter of design choice depending upon the application that the nozzle is to be used for and since Appellant did not timely traverse the examiner's assertion of Official Notice that using the claimed steel composition is well-known in the art, such assertion is taken to be admitted prior art (MPEP 2144.03(c)). It would have been obvious to have provided the claimed steel composition, in order to provide a high strength steel material for the nozzle.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over '878 in view of Nakagawa et al. (US6007761).

'878 teaches the invention cited above with the exception of annealing the steel plate. Nakagawa et al. teach annealing a steel plate (col. 8, lines 13-17).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of '878 with annealing the steel plate, in light of the teachings of Nakagawa et al., in order to strengthen the steel material prior to further processing operations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-21 and 23-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appellant's Admitted Prior Art [hereinafter APA] in view of '878.

APA teaches that devolatilizer nozzles are known to have perforations or holes and that small nozzle diameter holes are desirable because they increase devolatilization. In addition it is known to use steel for these nozzles (see paragraphs [0005]-[0008] of Appellants specification). Furthermore, it is known that devolatilizer nozzle is used to pass a volatile component through its perforations.

However, APA does not specifically disclose heat-treating the nozzle.

'878 teaches a method comprising: by perforating (2) a steel plate (1, English Translation, paragraph [18], lines 1-6), forming a devolatilizer nozzle from the steel plate (Figure 1), and heat treating the devolatilizer nozzle (English Translation, paragraph [08], lines 1-6). Note that the heat treating inherently increases the yield strength and tensile strength of steel.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of APA with heat treating the nozzle, in light of the teachings of '878, in order to strengthen the material of the nozzle.

Since Appellant did not timely traverse the examiner's assertion of Official Notice that using the claimed yield and tensile strength, the claimed sizes of holes, and the thickness of the plate are well-known in the art, such assertion is taken to be admitted prior art (MPEP 2144.03(c)). It would have been obvious to have provided the claimed yield and tensile strength, the claimed sizes of holes, and the thickness of the plate, in order to provide a nozzle having the desired strength requirements depending upon the application the nozzle is used for.

Furthermore, the particular steel used is considered an obvious matter of design choice depending upon the application that the nozzle is to be used for and since Appellant did not timely traverse the examiner's assertion of Official Notice that using the claimed steel composition is well-known in the art, such assertion is taken to be admitted prior art (MPEP 2144.03(c)). It would have been obvious to have provided the claimed steel composition, in order to provide a high strength steel material for the nozzle.

The claimed number of perforations is considered an obvious matter of design choice to a person of ordinary skill in the art, at the time of the invention, depending upon the desired devolatilization required.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of '878 as applied to claim 1 above, and further in view of Nakagawa et al.

APA/'878 teaches the invention cited above with the exception of annealing the steel plate.

Nakagawa et al. teach annealing a steel plate (col. 8, lines 13-17).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of APA/'878 with annealing the steel plate, in light of the teachings of Nakagawa et al., in order to strengthen the steel material prior to further processing operations.

(10) Response to Argument

The Appellant's main arguments are that '878 does not teach, show or suggest

(*i) forming a devolatilizer nozzle,*

(ii) forming the plate into a devolatilizer nozzle and to pass a volatile component through the perforations in the devolatilizer nozzle and

(iii) heat treatment of the devolatilizer nozzle to increase the strength thereof.

Appellant furthermore, argues that in rejecting dependent claims 4-15, 19-21, 23-25, 29-40 and 44-49, the Examiner has erred in stating that

(iv) *at the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art, to have used the claimed yield and tensile strength, the claimed sizes of holes and the thickness of the plate, and*

(v) Appellants have traversed the Examiner's assertion on numerous occasion and have made no admission as to the claimed yield strength, hole size, thickness of plate and steel composition.

The Examiner respectfully disagrees with the above arguments.

As for points (i-iii), the Examiner believes that '878 teaches a method of forming a devolatilizer nozzle from the steel plate (Fig. 1) by perforating the steel plate, forming nozzle from said plate, heat treating the nozzle and passing a volatile component through the perforations (both in the CVD device and highly corrosive solution discharged at high speeds during the spinning operation). As for whether '878 is heat treating the plate material for surface precipitation or to harden the stainless steel material, note that '878 (paragraph [23]) explicitly teaches that the heat treatment is done at a temperature of 800°C and it is well known and documented in the art that heat treating a stainless steel at temperatures on the order of 800°C inherently increases the yield strength and tensile strength of stainless steel.

In response to Appellant's assertion that '878 teaches the step of heat treating may actually reduce the hardness of the stainless steel material, the Examiner points out that in fact '878 (English Translation, paragraph [15], lines 5-7) clearly discloses that the material surface retained sufficient surface hardness and that the nozzle was very strong subsequent to the heat treating step. Furthermore, the hardness results, as tabulated in Table (1), which Appellant is relying on as an example to show that heat treatment by '878 reduces the hardness of the stainless steel, in fact refer to the surface hardnesses of the coating films and not the base materials (English Translation, paragraph [24], lines 1-8)

As for point (iv), Appellant's arguments are convincing, and the "design choice" portions of the rejections have been withdrawn.

As for point (v), the Examiner had invoked Official Notice (originally in an action mailed on 9/13/2006) that using the claimed yield and tensile strength, the claimed sizes of holes, and the thickness of the plate are well-known in the art. The Appellant had the opportunity (in a response filed on 10/20/2006) to timely traverse the Official Notice taken by the Examiner but failed to do so. As such, in accordance with MPEP 2144.03(c) such assertion is taken to be admitted prior art. Note that Appellant in subsequent responses filed on 2/21/2007 and 8/16/2007 has failed to even mention this issue.

As for the secondary reference, since the Appellant has not provided any detailed argument, the Examiner still relies on Nakagawa to teach the deficiencies of the primary references '878 and Appellant's Admitted Prior Art.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Sarang Afzali

Conferees:

David Bryant

Marc Jimenez